



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,665	09/23/2003	Jean-Claude Yvin	P08425US00/BAS	1061
881 7590 10/27/2009 STITES & HARBISON PLLC 1199 NORTH FAIRFAX STREET SUITE 900 ALEXANDRIA, VA 22314				
EXAMINER OLSON, ERIC				
ART UNIT		PAPER NUMBER		
1623				
MAIL DATE		DELIVERY MODE		
10/27/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/668,665

Applicant(s)

YVIN ET AL.

Examiner

ERIC S. OLSON

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 10, 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-7,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-7 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

This office action is a response to applicant's communication submitted August 10, 2009 wherein the rejection of record in the previous office action is traversed. This application was filed September 23, 2003, and makes no priority claims.

Claims 1, 5-7, 10, and 11 are pending in this application. Claim 11 is withdrawn from consideration as being directed to non-elected subject matter.

Claims 1, 5-7, and 10 as amended are examined on the merits herein.

The following rejections of record in the previous office action are maintained:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kong et al. (PCT International publication WO01/44263, Reference and English translation of record in previous action)

Kong et al. discloses oligosaccharides with immunostimulating and antitumor activity. (p. 6, first paragraph of the translation) The oligosaccharides fall within a general formula [I] that includes both branched (when m is 1-4) or unbranched (when m is 0) saccharides. (p. 6 last paragraph - p. 7 second paragraph of the translation) In a preferred embodiment, the saccharides are all glucose and are linked by beta 1,3

linkages. (p. 7 paragraphs 5 and 6, p. 8 first paragraph, translation) Tetrasaccharides and pentasaccharides are preferred. (p. 8 third paragraph, translation) The oligosaccharides can be used in a method for treating cancer by injection or oral administration. (p. 22, third paragraph, translation) They work by inducing expression of LI-2 and TNF-alpha in the peripheral blood. (p. 22, last paragraph, translation) The saccharides are disclosed in pharmaceutical formulations comprising pharmaceutical solutions and tablets. (p. 45 last paragraph - p. 47 first paragraph, translation) Kong et al. does not explicitly disclose an unbranched saccharide having all the characteristics recited in the instant claims.

It would have been obvious to one of ordinary skill in the art at the time of the invention to treat a subject in a method according to Kong et al. using an unbranched beta 1,3-glucan tetrasaccharide or pentasaccharide. One of ordinary skill in the art would have been motivated to use a 1,3-beta-glucan tetrasaccharides or pentasaccharide because all of these qualities (length, 1,3-beat bonds, glucose residues) are disclosed by Kong et al. as preferred embodiments of the invention. One of ordinary skill in the art would have been motivated to use an unbranched saccharide because Kong et al. discloses in formula [I] that the saccharides can be unbranched. One of ordinary skill in the art would reasonably have expected success because these saccharides are included within the broad teaching of Kong et al. as having the disclosed antitumor activity.

Therefore the invention taken as a whole is *prima facie* obvious.

Response to Arguments: Applicant's arguments, submitted August 10, 2009, with respect to the above ground of rejection, have been fully considered and not found to be persuasive to remove the rejection. Applicant argues that because Kong et al. only discloses a working example for one specific oligosaccharide, which is a branched oligosaccharide, and do not provide any specific examples of anti-tumor activity for unbranched oligosaccharides, one of ordinary skill in the art would not have regarded unbranched oligosaccharides as having anti-tumor activity. However, Kong et al. clearly discloses a broad range of oligosaccharides with anti-tumor activity, which include straight chain oligosaccharides. The fact that the reference consistently defines the number of side chains as 0-4 rather than 1-4 clearly shows that Kong et al. does in fact intend to identify straight chain oligosaccharides as having useful antitumor activity. All patent documents are considered to be enabled for what they teach unless there is clear evidence of non-enablement.

Applicant further argues that Kong et al. discloses that synthesis of oligosaccharides is difficult and complex, and does not disclose how to make the straight-chain oligosaccharides. However, this long, difficult synthesis is only necessary for producing branched oligosaccharides. Making unbranched homopolymers is much simpler to one skilled in the art. Furthermore, even if it is assumed that one skilled in the art would not be able to synthesize a straight-chain tetrasaccharide or pentasaccharide without guidance, one skilled in the art would in fact be able to modify even the synthesis of the branched oligosaccharide to arrive at a straight chain oligosaccharide, by leaving off the 1,6-linked glucosyl side chain residues.

For these reasons the rejection is deemed proper and made **FINAL**.

Conclusion

No claims are allowed in this application. **THIS ACTION IS MADE FINAL.**

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC S. OLSON whose telephone number is (571)272-9051. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia Anna Jiang can be reached on (571)272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric S Olson/

Examiner, Art Unit 1623

10/21/2009

/Shaojia Anna Jiang/

Supervisory Patent Examiner, Art Unit 1623